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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,420	04/20/2004	Scott Dewey	GP-303953	5380

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EXAMINER

KARLSEN, ERNEST F

ART UNIT	PAPER NUMBER
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2829

DATE MAILED: 10/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/828,420	Applicant(s) DEWEY ET AL.	
	Examiner Ernest F. Karlsen	Art Unit 2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what the high voltage component of claims 1 and 10 is or what is provided by providing the high voltage component of claim 15. It appears that the high voltage component is merely a voltage component of the output of the fuel cell. If the high voltage component is the fuel cell stack the claims are improper for claiming the same thing twice.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimball et al in view of Jin. Kimball et al show a battery powered system with dc ground fault detection using a core and Hall plate with a differential winding but does not show use of such use in a fuel cell stack. Jin shows the equivalence of a battery and a fuel cell stack. See column 1 of Jin. It would have obvious to one of ordinary skill in the art at the time of the invention to have used the apparatus of Kimball et al in accord with teaching of Jin that such systems are equivalent because one skilled in the art would realize that such would provide the same benefits in a fuel cell system as provided in a battery system. With regard to claims 1-19, in Kimball et al, element 10 is a battery, conductor 13a is connected to the positive terminal of the battery and conductor 13b is connected to the negative terminal of the battery, element 25 is a field concentrator with

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an opening where the current in the conductors flows in opposite directions and a Hall plate sensor 25 or 325 is in a gap in the concentrator. Element 51 of Kimball et al is an amplifier. Hall sensors have to have a current source to be operational as called for by claim 4. Element 25 of Figure 2 is a toroid as called for by claim 5 and the sensor is in a gap in the toroid as called for by claims 6, 11 and 17. Ferrite is a common composition for magnetic toroid as claimed in claim 7. Claim 8 is not understood but whatever it is Jin shows use of a fuel cell in an automobile. The limitation of claims 9, 14 and 19 is inherent in the combination of Kimball et al and Jin.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kawakami, Sonntag and Skala show additional fuel cell and battery equivalence. Tompkins et al, Tanka et al, Lopetrone et al, Guzman, Dresti et al and Gaughan et al are cited to show additional differential ground fault detectors.

Any inquiry concerning this communication should be directed to Ernest F. Karlsen at telephone number 571-272-1961.

Ernest F. Karlsen

September 27, 2006.


ERNEST KARLSEN
PRIMARY EXAMINER